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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,303	07/09/2003	Uldis A. Ziemins	FIS920030060US1	1302
32074	7590	06/15/2004	EXAMINER	
INTERNATIONAL BUSINESS MACHINES CORPORATION			VALENTIN, JUAN D	
DEPT. 18G			ART UNIT	
BLDG. 300-482			PAPER NUMBER	
2070 ROUTE 52			2877	
HOPEWELL JUNCTION, NY 12533			DATE MAILED: 06/15/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/604,303	ZIEMINS ET AL.	
	Examiner	Art Unit	
	Juan D Valentin II	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 and 13-21 is/are allowed.
- 6) ☒ Claim(s) 9-12 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/09/2003</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings are required in this application because the reference numerals and titles are hard to read. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Specification***

2. Claim 19 objected to because of the following informalities: In line 5 of claim 19, it is thought that the word "shutting" is mistyped, and should read "shuttling". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 9-12 & 21-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Graham et al. (USPN '737, hereinafter Graham) in view of Hahn et al. (USPAPN 2003/0005561 A1, hereinafter Hahn).

**Claim 9**

Graham in conjunction with Fig. 2, discloses a laser emitting diode 91 having an invisible light source such that said laser emitting diode emits an invisible light beam, a reflecting mirror 92 & 93 positioned opposite and approximately coaxial with said laser emitting diode 91, and an optical detector 94 positioned opposite and approximately coaxial with said reflecting mirror to collect said invisible light beam (col. 5, lines 27-33).

Graham substantially teaches the claimed invention except that it fails to show a laser emitting diode having a visible light source and an invisible light source such that said laser emitting diode emits a visible light beam and an invisible light beam. Hahn shows that it is known to provide a laser emitting diode having a visible light source and an invisible light source such that said laser emitting diode emits a visible light beam and an invisible light beam [0080-0085] for a light curtain system for establishing a protective light curtain. It would have been obvious to someone of ordinary skill in the art to combine the device of Graham with the dual light source emitting both visible and invisible light beams of Hahn for the purposes of providing protection from accidental interruption of the light curtain [0021].

**Claims 10-12**

Graham in view Hahn discloses the claimed invention except for the particular arrangement of the visible and invisible light emitters with respect to each other. It would have been obvious to one having ordinary skill in the art at the time of the claimed invention was

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made to place the visible and invisible emitters in positions that enable for maximum light exposure for both beams and/or minimize the space requirements of the desired light curtain system, since it has been held that omission of an element and its function in a combination where remaining elements perform the same functions as before involves only routine skill in the art.

**Claims 21-24**

The methods as claimed can be performed by apparatus of Graham and Graham in view of Hahn as applied above to claims 9-12.

***Allowable Subject Matter***

4. Claims 1-8 & 13-20 are allowed over prior art of record.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, the prior art fails to disclose or make obvious “an optical beam splitter having an outer reflecting surface and an inner reflecting surface, said outer reflecting surface reflecting approximately 100% of said invisible light beam and said inner reflecting surface reflecting approximately 50% of said visible light beam in the same path as said invisible light beam, said optical polarizing beam splitter positioned between and approximately coaxial with said invisible light source and said visible light source” and in combination with the other recited limitations of claim 1. Claims 2-6 are allowed by virtue of dependency on the allowed claim 1.

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Regarding claim 7, the prior art fails to disclose or make obvious “means for alternatively shuttling said visible light source and said invisible light source in optical alignment with said reflecting mirror” and in combination with the other recited limitations of claim 7.

Regarding claim 8, the prior art fails to disclose or make obvious “a dual mirror assembly positioned between and approximately coaxial with said visible light source and said invisible light source, said dual mirror assembly having a first side opposite said invisible light source and a second side opposite said visible light source such that in operation said invisible light beam and said visible light beam are both reflected and converge at a common point” and in combination with the other recited limitations of claim 8.

Regarding claim 13, the prior art fails to disclose or make obvious “positioning an optical beam splitter between and approximately coaxial with said invisible light source and said visible light source, said optical polarizing beam splitter having an outer reflecting surface and an inner reflecting surface, said outer reflecting surface reflecting approximately 100% of said invisible light beam and said inner reflecting surface reflecting approximately 50% of said visible light beam in the same path as said invisible light beam” and in combination with the other recited limitations of claim 13. Claims 14-18 are allowed by virtue of dependency on the allowed claim 13.

Regarding claim 19, the prior art fails to disclose or make obvious “providing means for alternatively shuttling said visible light source and said invisible light source in optical alignment with said reflecting mirror” and in combination with the other recited limitations of claim 19.

Regarding claim 20, the prior art fails to disclose or make obvious “positioning a dual mirror assembly between and approximately coaxial with said visible light source and said

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invisible light source, said dual mirror assembly having a first side opposite said invisible light source and a second side opposite said visible light source such that in operation said invisible light beam and said visible light beam are both reflected and converge at a common point” and in combination with the other recited limitations of claim 20.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### *Conclusion*

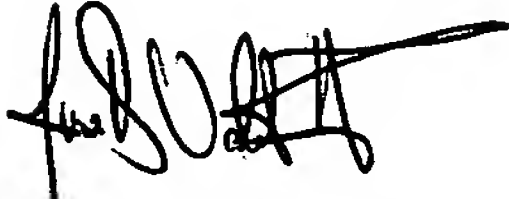
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan D Valentin II whose telephone number is (571) 272-2433. The examiner can normally be reached on M-Th., Every other Fr..

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Frank G Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Juan D Valentin II  
Examiner 2877

JDV

June 9, 2004



Michael P. Staira  
Patent Examiner  
Technology Center 2800